

Amendments to the Specification:

Please replace paragraph [0021] with the following amended paragraph:

[0020] In a preferred configuration, the evaporation unit comprises a plurality of channels as shown in Figure 3 which are arranged parallel to one another, since it is expedient to supply a plurality of smaller channels of the evaporation unit with heat than to supply a large central evaporation unit. ~~The surface area of the evaporation unit is increased, which leads to improved heat transfer between catalyst layer and evaporation unit. The branching also readily allows multiple contact with the catalyst layers, for example by an arrangement in which one or more bores are guided onto each catalyst layer, and the evaporation unit is then arranged in these bores. However, this too is dependent on the reactor design and the reaction which is to be carried out.~~

Please replace paragraph [0034] with the following amended paragraph:

[0034] An evaporation unit 2 in which a liquid starting material 1 is evaporated adjoins the chambers 9, 10, 11. The starting material is fed to the chambers 9, 10, 11 as starting-material vapor 3 via outlet means 5, 6, 7 of a distributor system 4. The evaporation unit 2 is in substantially direct contact with the hot reactor zone, preferably in direct contact with the hot catalyst layers of the chambers 9, 10, 11 (i.e., the area of the evaporation unit 2 in which the evaporation substantially takes place is at least partially surrounded by the

chambers 9, 10, 11 and therefore by the hot reactor zone). The evaporation unit 2 may be arranged in such a way that it is completely surrounded by the chambers (as shown in Figure 2), or it may be arranged on the edge region, in such a way that it is at least partially surrounded by the chambers 9, 10, 11 (e.g., that it laterally adjoins these chambers, as illustrated in Fig. 1). In this case, the evaporation area is in each case arranged at the level of the hot reactor zone of the chambers 9, 10, 11, substantially parallel thereto.

Please replace paragraph [0037] with the following amended paragraph:

[0037] Preferably in each case one outlet 5, 6, 7 is assigned to each catalyst-containing chamber 9, 10, 11, in order to distribute the starting-material vapor 3 as uniformly as possible. In a preferred embodiment, one outlet 5, 6, 7 projects into the associated chamber 9, 10, 11. The starting material 3 in vapor form is admitted to the corresponding chambers 9, 10, 11 and is reacted in the chambers 9, 10, 11. The reaction generates heat, which in turn is made available for evaporation of the liquid starting material 1 in the evaporation unit 2. The device according to the present invention also has means 8, 12 which are known per se for discharging the products, the reacted products of the starting material 3 being passed out of discharge means 8 into a collection manifold 12. This configuration can be used to provide hydrogen to a fuel cell of a fuel cell system
13.

Please add the following new paragraph after paragraph [0046]:

[0046.1] In a preferred configuration, the evaporation unit comprises a plurality of channels as shown in Figure 3 which are arranged parallel to one another, since it is expedient to supply a plurality of smaller channels of the evaporation unit with heat than to supply a large central evaporation unit. The surface area of the evaporation unit is increased, which leads to improved heat transfer between catalyst layer and evaporation unit. The branching also readily allows multiple contact with the catalyst layers, for example by an arrangement in which one or more bores are guided onto each catalyst layer, and the evaporation unit is then arranged in these bores. However, this too is dependent on the reactor design and the reaction which is to be carried out.